

WHAT IS CLAIMED IS:

1. A method for delivering a molecule to a patient comprising administering amniotic epithelial cells to the skin of the patient;
5 wherein said cells are capable of delivering said molecule.
2. The method of claim 1, wherein said patient is a human patient.
3. The method of claim 2, wherein said molecule is useful in achieving a desired
10 effect.
4. The method of claim 3, wherein said cells are capable of delivering said molecule to the skin in amounts sufficient to achieve the desired effect.
- 15 5. The method of claim 4, wherein said desired effect is selected from the group consisting of a therapeutic effect, a cosmetic effect, a diagnostic effect and a prophylactic effect.
6. The method of claim 5, wherein said cells were engineered to include an
20 exogenous polynucleotide.
7. The method of claim 3, wherein said molecule is selected from the group consisting of a growth factor, a ligand, an immunologically active molecule, an anti-microbial protein, an anti-inflammatory protein, an anti-neovascularization protein, a
25 protease inhibitor, a hair growth promoting factor, an antiviral protein, a bioactive antibody, a bioactive single chain antibody, PDGF-beta, KGF, KGF-2, FGF-2, EGF, TGF-a, epiregulin, VEGF, NGF, GM-CSF, TGF-b, IGF-I, HGH, a bactericidal/permeability-increasing protein, a protein, a polypeptide, a peptide, a defensin, a collectin, Granulysin, Protegrin-1, SMAP-29, lactoferrin, Calgranulin C, interleukin-1 receptor antagonist, soluble
30 TNF receptor, soluble CTLA4, interleukin-10, endostatin, angiostatin, soluble VEGF receptor, TIMPs, PAI-1, PAI-2, ecotin, wnt, sonic hedgehog, soluble herpes viral receptor Hve A, herpesvirus entry mediator C (HveC), the herpesvirus immunoglobulin-like receptor (HIgR), and soluble herpes surface protein gD.

8. The method of claim 1, wherein said amniotic epithelial cells are selected from the group consisting of human cells, animal cells, mammalian cells.

5 9. The method of claim 1, wherein said cells are capable of delivering said molecule in a nutrient-poor environment found on the skin.

10. The method of claim 2, wherein said cells are human amniotic epithelial cells.

10 11. The method of claim 1, wherein said method further comprises administering a support to said skin.

15 12. The method of claim 11, wherein said support is selected from the group consisting of a membrane, a matrix, a gel, a web, a net, a natural membrane, a synthetic membrane, and a material capable of performing the function of a membrane.

13. The method of claim 12, wherein said membrane is selected from the group consisting of amnion membrane, cerebral dura mater membrane, fascia lata membrane, and pericardium membrane.

20 14. The method of claim 6, wherein said cells were engineered using a vector.

25 15. The method of claim 14, wherein said vector is selected from the group consisting of a retroviral vector, an adenoviral vector, a lentiviral vector, a viral vector, an adeno-associated viral vector, a plasmid vector and a cosmid vector.

30 16. A composition for delivering a molecule to a patient comprising cells capable of delivering said molecule to the patient, a support capable of facilitating delivery of said molecule to the patient, wherein said cells are capable of delivering said molecule in a nutrient-poor environment found on the skin.

17. The composition of claim 16, wherein said molecule is useful in achieving a desired effect.

18. The composition of claim 17, wherein said cells are capable of delivering said molecule to the skin in amounts sufficient to achieve the desired effect.

5 19. The composition of claim 18, wherein said wherein said cells were engineered to include an exogenous polynucleotide.

20. The composition of claim 18, wherein said cells are human amniotic epithelial cells.